

Spot Safety Project Evaluation

Project Information

Order ID: 41000033925

Project ID: 13-09-201

Location: SR 1512 (Amherst Road) at Bridge No. 1

County: Burke

City: Morganton

Division: 13

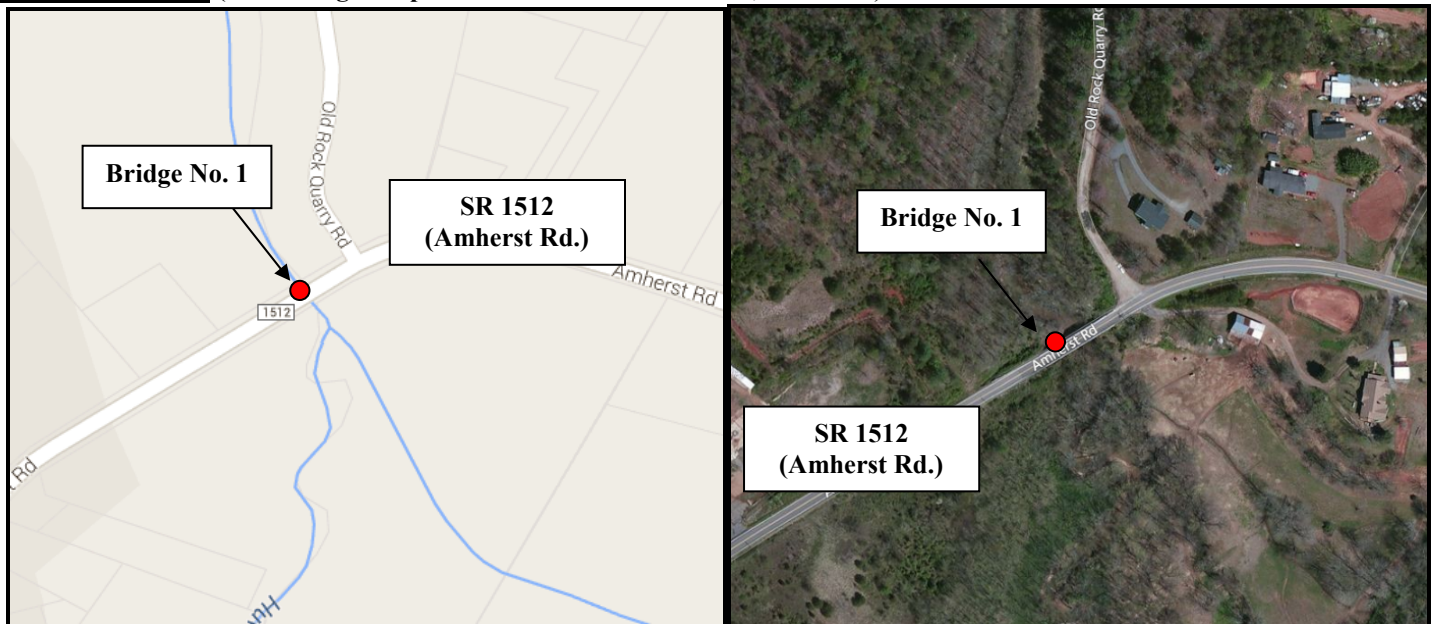
Signal ID: N/A

Countermeasure: Install bridge approach guardrail.

Project Completion: Between January 1, 2011 and March 31, 2011

Project Cost: \$45,000.00

Map and Aerial (from Google maps – Coordinates are 35.76021, -81.65502)



Naive Before and After Analysis

Before Period: January 1, 2007 to December 31, 2010 (4 years)

Const. Period 1: January 1, 2011 to March 31, 2011 (3 months)

After Period 1: April 1, 2011 to February 28, 2014 (2 years, 11 months)

Const. Period 2: March 1, 2014 to October 31, 2014 (8 months)

After Period 2: November 1, 2014 to October 31, 2015 (1 year)

Analysis Criteria: Treatment data consisted of all crashes on SR 1512 (Amherst Rd.) with a 0-foot y-line and within milepost range from MP 0.106 to 0.306.

Target Crashes: Lane Departure Crashes including:

- Run-Off Road (left, right or straight)
- Sideswipe (opposite direction)
- Fixed Object
- Rollover
- Head-on

<u>Treatment Information</u>	Before (4 yrs)	After Period 1 (2 yrs, 11 mo)	After Period 2 (1 yr)
Total Crashes	8	3	0
Total Crashes Per Year (CPY)	2.0	1.0	0.0
Total Severity Index	15.1	1.0	N/A
Target Crashes	8	3	0
Total Crashes Per Year (CPY)	2.0	1.0	0.0
Target Crash Severity Index	15.1	1.0	N/A
Guardrail Hit Crashes	0	1	0
Guardrail Crashes Per Year (CPY)	N/A	0.3	N/A
Guardrail Hit Severity Index	N/A	1.0	N/A
Volume (2008, 2012, 2015)	2,200	2,100	2,100

<u>Injury Crash Summary</u>	Before (4 yrs)	After Period 1 (2 yrs, 11 mo)	After Period 2 (1 yr)
Fatal Injury Crashes per Year	1	0	0
Class A Injury Crashes per Year	0	0	0
Class B Injury Crashes per Year	4	0	0
Class C Injury Crashes per Year	1	0	0
Property Damage Only per Year	2	3	0

Items for Discussion/Concerns

The analysis was split into three time periods to account for the time where only the spot safety improvements had been completed (After 1) and for the time after the bridge was replaced through TIP B-5135 (After 2). The total crashes per year experienced a decreased of 1 CPY between the before period and after period 1 (2 CPY to 1 CPY). There were no crashes in the second after period. Similarly, the target crashes decreased by 1 CPY between the before period and after period 1 (2 CPY to 1 CPY). There were also no target crashes in the second after period. In addition to the reduction in the number of crashes between the before period and after 1 period, the severity decreased from 15.1 to 1.0 over the same time period.

Data Prepared For

The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Ross Oliver

Work Group/Consultant: Hatch Mott MacDonald

Date: December 4, 2015

SS# 13-09-201
Order# 41000033925
Burke County
BEFORE Period
1/1/2007 - 12/31/2010

LEGEND

→

MOVING VEHICLE

⊠

→

PARKED VEHICLE

⊠

↘

PARKING VEHICLE

→

⊠

MOVABLE OBJECT

→

⊠

→

HEAD ON

→

⊠

→

REAR END

→

⊠

↘

RAN OFF ROAD

→

⊠

DAYLIGHT CRASH

→

⊠

NIGHT CRASH

→

↘

ANGLE

→

↘

↘

TURNING

→

⊠

→

BACKING

→

⊠

↘

SIDESWIPE

→

⊠

INJURY

→

⊠

FATALITY

→

→

9 MPH OR LESS

→

→

10 MPH TO 19

→

→

20 MPH TO 29

→

→

30 MPH TO 39

→

→

40 MPH TO 49

→

→

50 MPH TO 59

→

→

60 MPH TO 69

→

→

70 AND UP

→

→

SPEED UNKNOWN

●

STOP SIGN

A

ANIMAL

P

PEDESTRIAN

B

BICYCLE

T

TRAIN

*

DRIVER AT FAULT

D

DRY

W

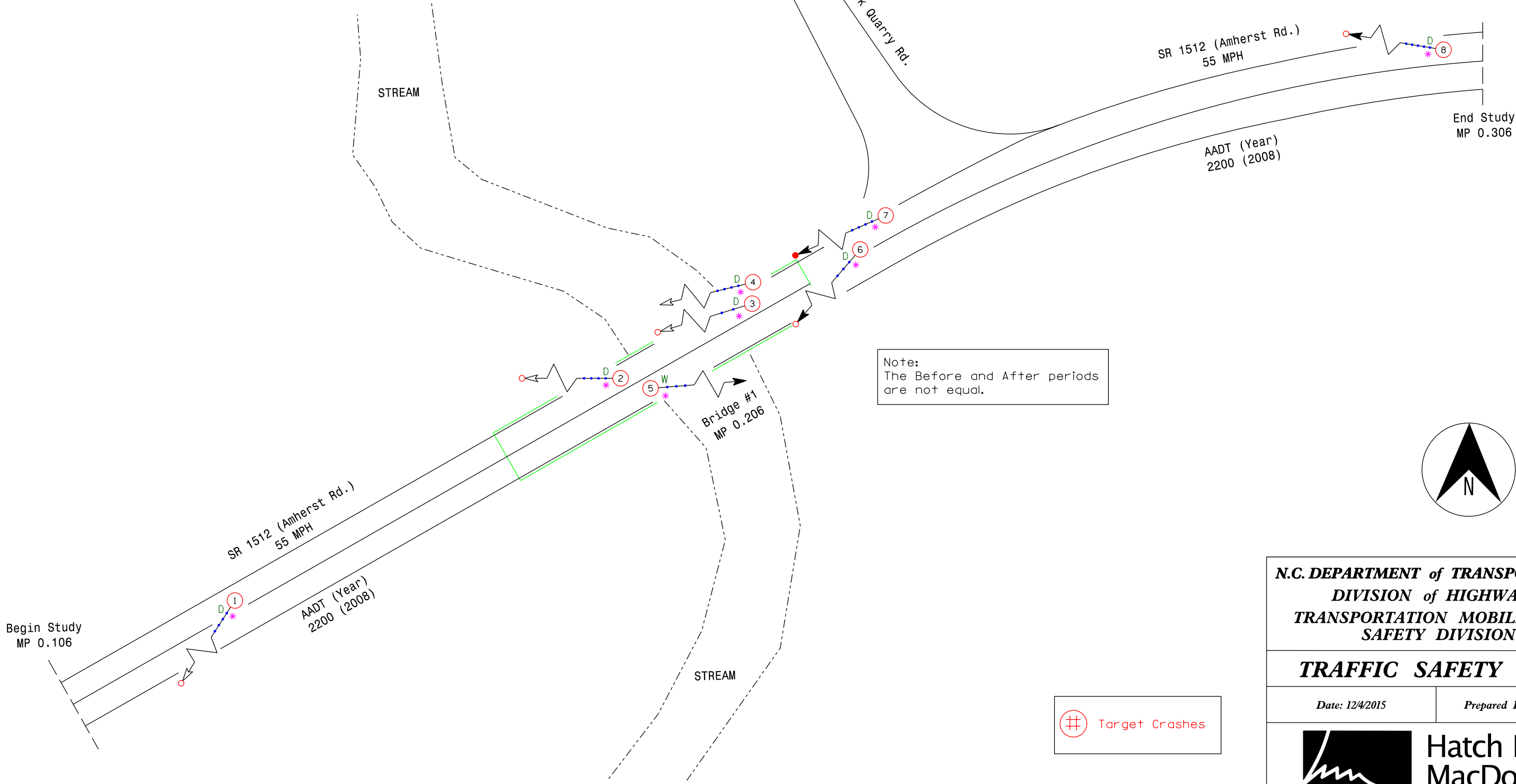
WET

I

ICY OR SNOWY

O

Other



N.C. DEPARTMENT of TRANSPORTATION

DIVISION of HIGHWAYS

TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

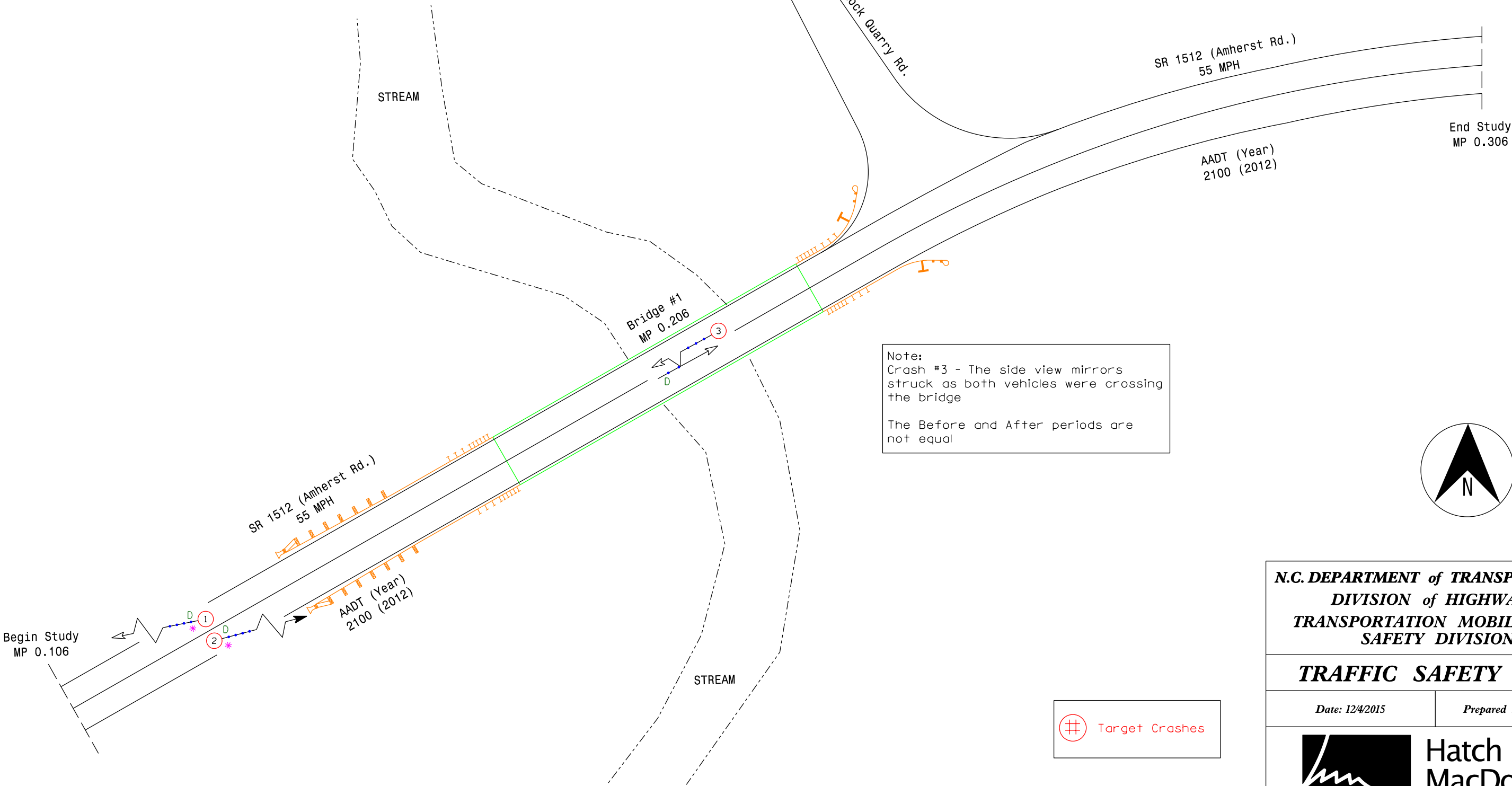
Date: 12/4/2015

Prepared By: R. Oliver

Hatch Mott MacDonald

SS# 13-09-201
Order# 41000033925
Burke County
AFTER Period I
4/1/2011 to 2/28/2014

LEGEND					
	MOVING VEHICLE		ANGLE		9 MPH OR LESS
	PARKED VEHICLE		10 MPH TO 19		ANIMAL
	PARKING VEHICLE		20 MPH TO 29		PEDESTRIAN
	MOVABLE OBJECT		30 MPH TO 39		BICYCLE
	HEAD ON		40 MPH TO 49		TRAIN
	REAR END		50 MPH TO 59		DRIVER AT FAULT
	RAN OFF ROAD		60 MPH TO 69		DRY
	DAYLIGHT CRASH		70 AND UP		WET
	NIGHT CRASH		SPEED UNKNOWN		ICY OR SNOWY
			FATALITY		Other



Target Crashes

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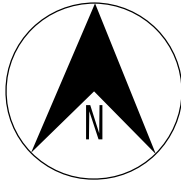
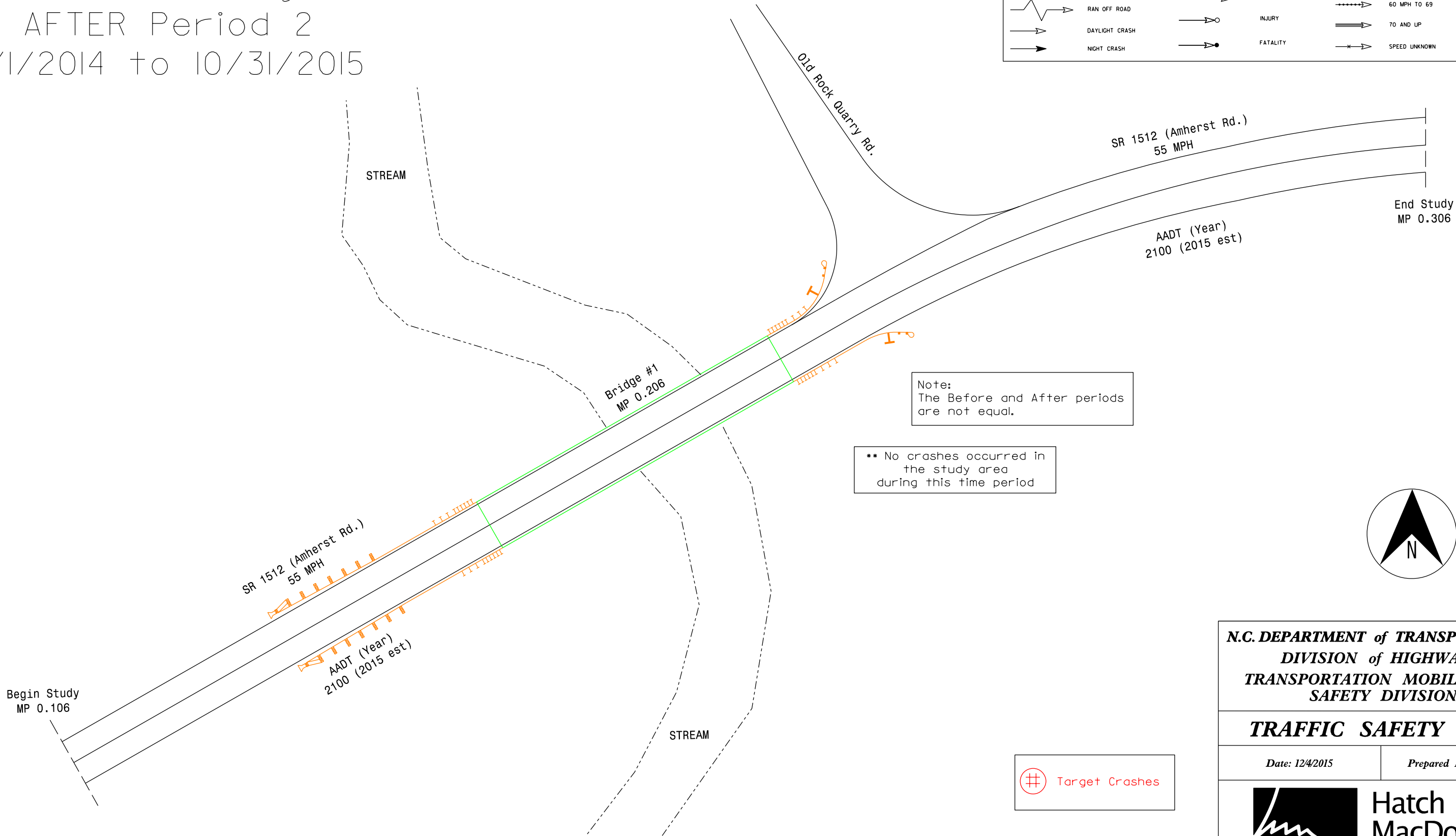
Date: 12/4/2015

Prepared By: R. Oliver

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SS# 13-09-201
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Burke County
AFTER Period 2
11/1/2014 to 10/31/2015

LEGEND									
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		STOP SIGN		
	PARKED VEHICLE		TURNING		10 MPH TO 19		ANIMAL		
	PARKING VEHICLE		BACKING		20 MPH TO 29		PEDESTRIAN		
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		BICYCLE		
	HEAD ON		INJURY		40 MPH TO 49		TRAIN		
	REAR END		FATALITY		50 MPH TO 59		DRIVER AT FAULT		
	RAN OFF ROAD		SPEED UNKNOWN		60 MPH TO 69		DRY		
	DAYLIGHT CRASH				70 AND UP		WET		
	NIGHT CRASH						ICY OR SNOWY		
							Other		



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TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: 12/4/2015

Prepared By: R. Oliver



Hatch Mott MacDonald